respective second contact, and an actuator positioned relative to each first electrical contact and responsive to different sensed temperatures for alternately positioning the respective first movable contact into contact with and spaced away from the respective second contact;

an electrical resistor coupled between the respective first and second contacts of one or more of the plurality of snap-action thermal switches;

a wiring harness having the plurality of snap-action thermal switches electrically coupled thereto in parallel; and

a means for determining whether each of the plurality of snap-action thermal switches is electrically coupled to the wiring harness.

REMARKS

Claims 1-27 remain in the case. Claims 1-7, 13, 17-20, and 22-27 are amended. Claim 13 is re-written in independent format. Claim 28 is newly presented.

Claim Rejections Under 35 USC § 112

Claim 18 was rejected under 35 USC § 112, first paragraph, for reciting the electrically resistive element (now "conductor") being coupled between the first terminal and the second terminal. The Examiner suggested that claim 18 contradicts the recitation of parent claim 17 which recites the electrically resistive conductor being coupled between the first terminal and an "other" terminal.

Claim 18 is amended to recite that the "other" terminal is identical to the second terminal. Therefore, the electrically resistive conductor is properly coupled between the first terminal and the second terminal.

Claim 27 was rejected under 35 USC § 112, second paragraph, for lack of antecedent basis. Claim 27 is amended to supply antecedent basis for the additional limitations. No new matter is added.

Claim Rejections Under 35 USC § 102

Claims 1-6, 17, and 19-26 were rejected under 35 USC § 102(b) as being anticipated by U.S. Pat. No. 4,306,210 to Saur.

The invention recited in claim 1 is patentable over Saur which teaches an "electrical switch assembly including two separate, temperature-dependent electrical switches, one of the electrical switches being substantially mechanically acting and the second of the electrical switches being a non-mechanical, solid-state switch." See, Abstract.

A principal object of the Saur patent is to provide a temperature-responsive electrical switch containing at least two separate electrical circuits which may be independently switched on and off in dependence of the occurrence of different levels of temperature. Column 1, lines 25-30.

Thus, Saur teaches a single housing having a first mechanical electrical switch and a second semiconductor switch, there being separate electrical contact pins leading to each of the electrical switches. Column 1, lines 31-37.

Accordingly, Saur teaches in FIG. 1 a "two-stage" switch having a second independent switch embodied as a temperature-dependent semiconductor switch **31**. Column 3, lines 36-43.

The construction and function of the other embodiments of the second semiconductor switch **31**, as taught by Saur, are all "identical" to the embodiment taught in FIG. 1. See, respectively, column 4, lines 11-14 regarding the teaching of FIG. 2; column 4, lines 15-17 regarding the teaching of FIG. 3; and column 5, lines 1-11 regarding the teaching of FIG. 4. Therefore, the only teaching of Saur is a "two-stage" switch having a second independent switch, *i.e.* semiconductor element **31**.

The invention as presently recited in amended claim 1 is a snap-action thermal switch having a resistive conductor coupled to an output thereof.

The invention recited in claim 1 is distinguished from Saur by reciting a resistive conductor coupled to an output of the snap-action thermal switch. In contrast, Saur teaches a "two-stage" switch having the semiconductor element **31** coupled as a second independent switch. Column 3, lines 36-43. Furthermore, the second switch constitutes a second "separate electrical circuit" which may be switched on and off independently of the first switch. Column 1, lines 25-30.

Because Saur teaches having the semiconductor element **31** coupled as a second independent switch on a second "separate electrical circuit," the semiconductor element **31** inherently cannot be coupled to an output of the first switch.

Furthermore, the invention recited in claim 1 is distinguished from Saur by reciting a resistive conductor coupled to an output of the snap-action thermal switch. In contrast, Saur teaches only a second switch, *i.e.* semiconductor element **31**.

For at least the above reasons, claim 1 is allowable over Saur.

Dependent claims 2-3 and 5-6 are amended only to conform with amended claim 1. No new matter is added.

Dependent claim 4 is amended only to more particularly point out the subject matter that the Applicant regards as the invention. No new matter is added.

Claims 2-6 are allowable as depending from allowable claim 1.

Claims 17, 20 and 24 are different in scope from claim 1. However, the above arguments directed to claim 1 are sufficiently applicable to claims 17, 20 and 24 as to make repetition unnecessary. Thus, for each of the reasons above, claims 17, 20 and 24 are believed to be allowable over the cited art.

Claims 18-19 are allowable as depending from allowable claim 17. Dependent claims 18-19 are amended only to conform with amended claim 17. No new matter is added.

Claims 22-23 are allowable as depending from allowable claim 20. Dependent claims 22-23 are amended only to conform with amended claim 20. No new matter is added.

Claim 24 is further allowable over Saur as reciting a method that includes detecting a minimum electrical resistance of the electrically resistive conductor.

The Examiner suggests that the method steps as recited in claim 24 are inherently necessitated by the device structure of Saur. The Applicant respectfully disagrees. Saur teaches a "two-stage switch." Column 1, lines 25-30. Thus, Saur teaches only a "switch" that inherently provides only an open or a closed circuit.

Rather, in contrast to the teachings of Saur, a device for measuring electrical resistance must be introduced into the circuit to measure electrical resistance. Saur teaches only two independent switches.

Therefore, in contrast to providing the resistance "detecting" ability present invention, the switch as taught by Saur inherently fails to teach any means for "detecting" electrical resistance, as recited in claim 24. Without more, the "switch" as taught by Saur inherently fails to "detect" electrical resistance because it only either opens or closes a circuit.

For at least the above reasons, claim 24 is allowable over Saur.

Claims 25-27 are allowable as depending from allowable claim 24. Dependent claims 25-26 are amended only to conform with amended claim 24. No new matter is added.

Claims 7-8 were rejected under 35 USC § 102(b) as being anticipated by U.S. Pat. No. 5,337,036 to Kuczynski.

The invention recited in claim 7 is patentable over Kuczynski which teaches a thermostat **210** having a resistance type heating element **210a** wrapped about the exterior of the thermostat **210** and connected to one of its current carrying terminals **212a** so that it is also in series with the current carrying circuit. The heating element **210a** is operated to supply or augment heat to maintain the bimetallic element open where necessary to prevent the bimetallic element from resetting too quickly. See, Figures 23-24 as described at column 13, line 59 - column 14, line 24.

The invention as presently recited in claim 7 is a switch having first and second electrical contacts, an actuator positioned relative to the first electrical contact for spacing it away from the second contact, and a discrete electrical resistor coupled in parallel with the first and second contacts and spaced away from the actuator.

Claim 7 is patentable over Kuczynski. Claim 7 recites a discrete electrical resistor coupled in parallel with the first and second contacts. In contrast to the resistor recited in claim 7, Kuczynski teaches a resistance type "heating element." Column 13, line 64 - column 14, line 1 (emphasis added).

Additionally, claim 7 recites the electrical resistor being a "discrete" component. In contrast to the "discrete" component of claim 7, Kuczynski teaches a wire-type resistance heating element **210a**, as shown in Figures 23-24.

Furthermore, claim 7 recites the electrical resistor being spaced away from the actuator. Therefore, the electrical resistor as recited in claim 7 does not substantially effect the

responsiveness of the actuator to a sensed temperature external to the switch. In contrast to the electrical resistor of claim 7 being spaced away from the actuator, the wire-type resistance heating element **210a** is actually wrapped about the thermostat **210** so that it can be operated to "supply or augment heat to the bimetallic element." Column 13, line 64 - column 14, line 24.

For at least the above reasons, claim 7 is allowable over Kuczynski. Claim 8 is allowable as depending from allowable claim 7.

Claim Rejections Under 35 USC § 103

Claims 9-12 were rejected under 35 USC § 103(a) as being obvious over Kuczynski.

The invention recited in claims 9-12 are patentable over Kuczynski at least as depending from allowable claim 7.

Allowable Subject Matter

Claims 13-16 were found to include allowable subject matter. The Examiner is thanked for advising that claims 13-16 rewritten in independent form would be allowable. Claim 13 is rewritten in independent form and is therefore believed to be allowable.

The Applicant declines at this time to rewrite claims 14-16 in independent form. The Applicant believes claims 14-16 to be allowable as depending from now allowable claim 7. However, the Applicant reserves the right to rewrite one or more of 14-16 in independent form at a later time.

Claim 28 is newly presented. Claim 28 differs in scope from allowable claim 13, but claim 28 incorporates the allowable subject matter of allowable claim 13. Newly presented claim 28 is therefore believed to be allowable as reciting subject matter the Examiner has found to be allowable.

The claims now being in form for allowance, reconsideration and allowance is respectfully requested.

For the Examiner's convenience, a clean copy of the claims, including the changes thereto, are provided in an Attachment hereto.

If the Examiner has questions or wishes to discuss any aspect of the case, the Examiner is encouraged to contact the undersigned at the telephone number given below.

Respectfully submitted,

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